



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,208	01/03/2006	Hiroynki Matsuura	33082M297	8170

441 7590 07/14/2009  
SMITH, GAMBRELL & RUSSELL  
1130 CONNECTICUT AVENUE, N.W., SUITE 1130  
WASHINGTON, DC 20036

EXAMINER

PILLING, CHRISTOPHER D

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

07/14/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/563,208

**Applicant(s)**

MATSUURA, HIROYUKI

**Examiner**

CHRISTOPHER PILLING

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03/23/2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 6, 7, 9 and 12-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 4, 6, 7, 9 and 12-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The Amendment filed March 23, 2009 has been entered. Claims 1, 4, 6, 7, 9, and 12-15 remain pending in the application.

***Claim Objections***

2. Claims 1, 7, and 9 are objected to because of the following informalities: The claim language “is provided therein with” should read “comprising”. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joebken (US 3,133,554) in view Dahl et. (US 2,254,472), further in view of Iwabuchi (US 5,678,595).

5. Regarding claims 9 and 15, Joebken discloses all the claimed features including, a valve comprising a valve element (15) that has an annular surface and a valve seat (25) with an opposing annular surface; the valve regulates (using hand wheel 28) a gap (25') between the valving element (15) and valve seat (25) hermetically closing the exhaust passage (18); the valve is provided with a plurality of purge gas supply ports (20), (21), and (22) circumferentially arrayed beside the annular surfaces of the valve seat (25) to jet a purge gas (Col 1, lines 29-36); plurality of purge gas supply ports (20), (21), and (22) are in communication with an annular communication chamber (23'). Joebken fails to disclose a valving element with a plurality of

purge gas supply ports; and a sealing member in the annular surface of the valve element or valve seat. However, Dahl teaches a gate valve comprising a valving element (24) with a plurality of purge gas supply ports (55) circumferentially arrayed. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device in Joebken to include a valving element with purge gas supply ports as taught by Dahl for the purpose of providing an additional means of cleaning and removing unwanted particles. Also, Iwabuchi teaches an exhaust valve comprising a valve seat (7) and valving element (5) with annular surface including a sealing member (8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device in Joebken to include a sealing member as taught by Iwabuchi for the purpose of providing an air tight seal between the valve element and valve seat.

6. Claims 1, 4, 6, 7, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masayuki (JP- 08-285132) in view of Walters, Jr. (US 4,383,546), further in view Dahl et. (US 2,254,472).

7. Regarding claims 1, 4, 6, 7, and 12-14, Masayuki discloses all the claimed features including, a low pressure system comprising a reaction vessel "vacuum chamber" connected to an exhaust passage (35), and a gate valve (32) provided in the exhaust passage (35), said system being configured to process substrate contained in the reaction vessel "vacuum chamber" by a predetermined treatment "heating function" by supplying a process gas into the vacuum chamber (abstract) while maintaining reduced pressure; the gate valve (32) has a valving element (14) and valve seat (25) both with annular surfaces, the valving element (14) is provided with a sealing member (26); the gate valve (32) regulates pressure by adjusting the gap "clearance" between the

valving element (14) and the valve seat (25), closing the exhaust passage (35) when the valving element (14) is seated on the valve seat (25). Masayuki fails to disclose a plurality of gas supply ports circumferentially arrayed besides the surfaces of the valving element and valve seat in communication with an annular communication chamber; and at least one purge gas valve and controller to control the supply of purge gas. However, Walters teaches a valve comprising a plurality of purge gas supply ports (56) and (58) circumferentially arrayed besides the surfaces of a valve seat (40) in communication with an annular communication chamber (54), further comprising a valve (130) and a controller switch (90) to control the supply of purge gas. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device in Masayuki to include purge gas supply ports as taught by Walters for the purpose of additionally cleaning and removing any unwanted particles not removed from the heating function. Also, Dahl teaches a gate valve comprising a valving element (24) with a plurality of purge gas supply ports (55) circumferentially arrayed. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device in Masayuki to include a valving element with purge gas supply ports as taught by Dahl for the purpose of providing an additional means of cleaning and removing unwanted particles.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER PILLING whose telephone number is (571)270-7825. The examiner can normally be reached on Monday - Friday, 9am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571)272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. P./  
Examiner, Art Unit 3753

/STEPHEN HEPPERLE/  
Primary Examiner, Art Unit 3753